



MISSILE REQUIREMENTS MANAGEMENT

National Defense Industry Association
Missile and Rockets Symposium

By

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OBJECTIVE

- Why every program needs a systematic process for managing System Engineering Requirements
- Discuss writing Good requirements
- Tools and Management of Requirements
- Requirements Partnering

Why System Engineering Requirements Management?

- Identify the scope of the effort
 - Allows the Capture of the totality of all Requirements
 - Forces discovery of mistakes when they cost less to correct
 - Identifies major risk items
- Manage change in a rapid development effort.
 - Industries with quick turn around use requirements engineering
- Configuration Control

"Houston ...
We Had a
Problem"



The Laws of Writing Good Requirements

- Thou Shall write Requirements which are **Necessary, Verifiable, and Attainable.**
- Thou Shall write Requirements that are **clear, concise, complete and consistent.**
- Thou Shall write Requirements that are **Traceable**

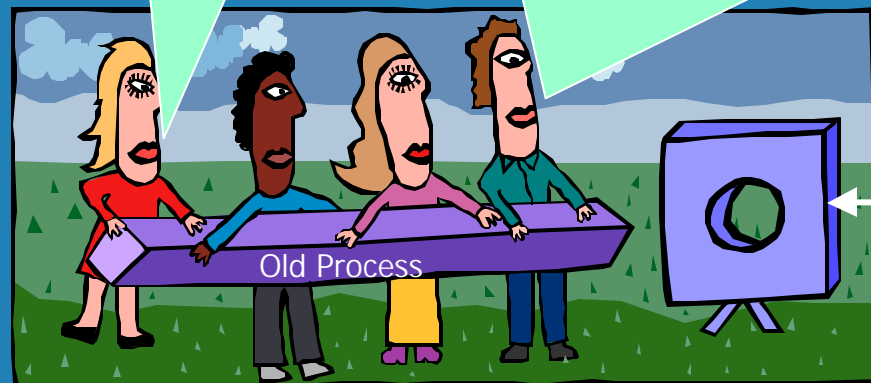
- Thou Shall **Not** write Requirements using such words as: **Maximize, Minimize, Easy, Flexible, Adequate, Sufficient, Fault Tolerant, Rapid, Quick, High Fidelity, Adaptable...**
- Thou Shall **Not** Write Requirements using such terms such as: **Are, Is, Was, Must, 'But not limited to', May, or And/or**

Managing Requirements

- The tools are evolving faster than our practices

Okay..So why are we using this Square peg again...?

Bob wants us to do it this way for he has always used the Square Peg in the past.



- Our Habits need to adjust to maximize efficiency

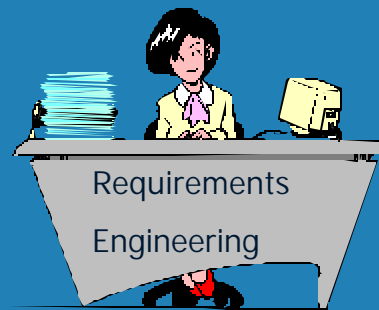
Managing Requirements

- Some practices which need to change

Hi Sally...
Here are some
tech docs I just
Finished Writing



Technical Writer



The Old Way

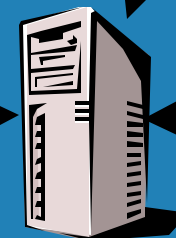
The Emerging New way



Technical
Writer



Requirements
Engineering

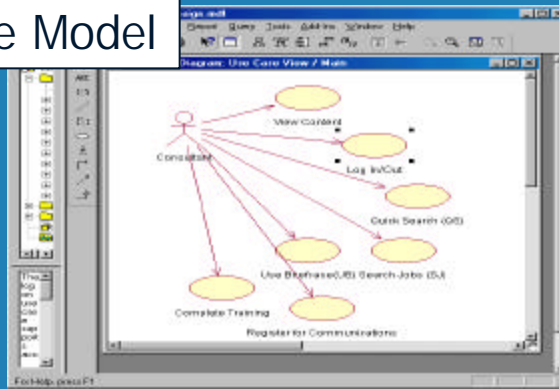


IPT
LEAD

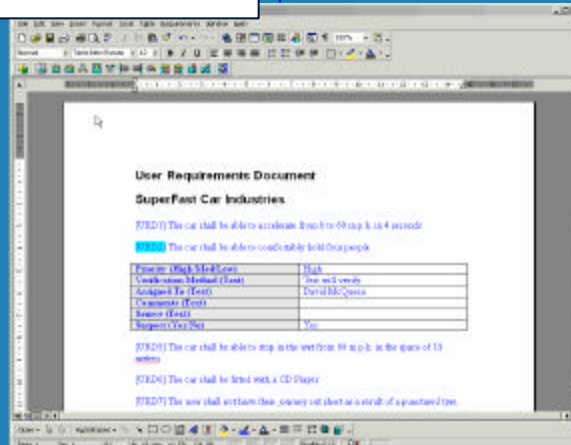
Managing Requirements

- Emerging Tools Provide More information and Faster Setup

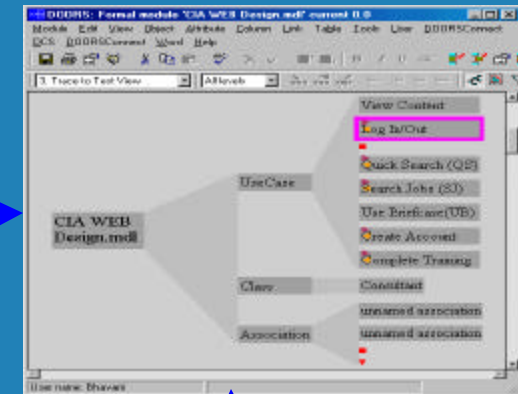
Rose Model



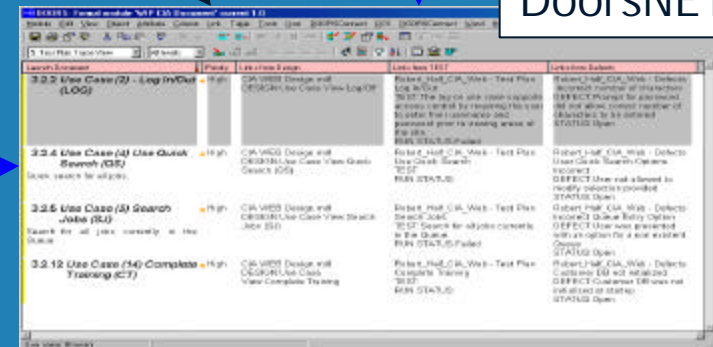
Microsoft Word



DocWord Express



DoorsNET



IPT Partnering

Okay they got that Requirement...
Oh wait, that one is not exactly
what I meant.....



Customer



Design Team

IPT Partnering

These are all the areas that the change would impact the program

Okay this was the Problem and we think this solution will solve the problem

Okay great...looks like we can still get the performance we want and meet our cost and schedule

Requirements Engineering Manager

Customer



Summary



We can improve on what we do to make the process easier,
and provide the information Faster